FARM TECHNOLOGY & ROBOTICS **MAY 2025**



Do you make maximum use of your robot data?

Using ForFarmers OptiRobot our Dairy and Robot Specialists are able to assess whether the interaction between robot settings, nutrition and health is optimal. It often turns out that small changes can make a big difference; Our Robot Specialists can help highlight areas where you can improve with the unique ForFarmers OptiRobot which provides:

- ✓ Greater insight
- ✓ More opportunities
- ✓ Increased returns

For more information speak to your local ForFarmers Robotic Specialist or visit >





0330 678 0982

info.uk@forfarmers.eu

www.forfarmers.co.uk

▼ ¶ **©** @ForFarmersUK







Turn up the dial with the UK's only Independent Robot Feeding Specialists

Advanced Robot balance nutrition, animal health and robot settings to maximise your robot investment. We've been feeding robot herds for over 10 years and our proven approach improves animal health and productivity with our clients seeing an average of 3kg extra of milk per cow per day and we keep these levels up.

So, if you're looking to invest in robots or looking to optimise your AMS performance, please get in touch with the experts.

01524 263 139 | robot@arn-ltd.com | www.arn-ltd.com/advanced-robot @ @advanced_ruminant_nutrition | f /arn360 | @ @arn_home







Editor



Right environment, right platform, right system, right people...

n this special supplement we focus on Farm Technology & Robotics, effectively putting milk producers in touch with the latest product information and related farm case-studies. The supplement highlights companies and specialists that aim to help you and your business, so get in touch, ask questions, and see who can help further you towards your business goals. On pages 14-15 Forfarmers' robotics expert Bas van Santen talks about ways to minimise stress on cows with robots, during the summer months. "It might be easier to adjust feeding times if your farm is home to automated feeding systems which can be adjusted to deliver more feed dur-

"Finding the right grazing and calving system sets your calves up for life", says Chris Bailey, farmer at Moorhouse Farm, see farm story on pages 22-23. Find out what technological improvements he's made to his dairy operation to maximise efficiency.

"In dairying, it's the attention to detail which delivers the extra performance gains, and the case is no different for robotics," says Ben Watts, Head of Technical and Innovation at Kite Consulting. Turn to page 30 for more from Ben.

There's plenty of case studies and pages of advice from industry experts with helpful advice to farmers - from those looking at introducing robots and new technology to those trying to make sense of all the information this generates.

ing cooler parts of the day."

Enjoy the issue, and as always, let us know what you think of our supplement, and any suggestions for future editions

Caroline Calder

"The switch [to robots] allowed cows to express natural behaviours, such as eating, lying down, and milking on their own schedule."

Stowell Farms, Farm Manager Neil Ridgway (page 7).

Caroline Calder is Editor of the weekly e-newsletter for British Dairying magazine, Organiser of the Cream Awards - Dairy Industry Trade Awards and a Director of WB Publishing.

4-5	FARM FEATURE
7	COW COMFORT
10	FEED TRIAL
13	FARM STORY
14	COW WELFARE
17	TECHNOLOGY
20	MILK TESTING
22	FARM STORY
25	INVESTMENT
26	HOOFCARE
28	TECHNOLOGY
30	PERFORMANCE
32	EDUCATION
34	MONITORING
35	MILK YIELDS
36	A.I.
37	TECHNOLOGY
38	MILK FEEDERS
39	CREAM AWARDS

"In my own field of cattle breeding there is no doubt that genomics has been the biggest development since the introduction of AI."

Breeding Consultant, Kevin Lane (pages 17-18).

BRITISH DAIRYING

Published by WB Publishing Ltd. www.britishdairying.co.uk www.creamawards.UK

Contacts:

Editor - Caroline Calder E caroline@calderwood.cc

Contributing, Mike Green, Karen Wright, Kevin Lane, Phil Eades

Publisher - Alan Whiblev

E alan@whibleys.net Tel: 07786 993789

Thank you to all our contributors.

Design Mark Day, Surface Creative Ltd. **Print** Warners Midlands Plc

British Dairying does not necessarily share the views of contributors. No responsibility is accepted for the claims made by advertisers. This magazine is copyright © WB Publishing Ltd.

No part of it may be reproduced in any form without prior permission of the publisher





Investment in innovation and technology cuts farm labour needs

Keeping up-to-date with the latest ideas and technology to replace farm labour while promoting cow health, welfare and production is the target of the Reed family from Devon.

> he main driver for introducing five robotic milking units at Gatcombe Farm, Seaton, 10 years ago was to tackle labour shortages while improving the Reed family's work-life balance. Today, this philosophy extends to everything that is done on the dairy unit from rearing youngstock to managing manure.

'The robots have been 100% successful and met all our expectations and more," says Robert Reed who runs the farm with his wife Julie and sons Tom and Nicholas. "It has totally changed and improved the lifestyle of the family.'

This has led to the introduction of more labour-saving technology and innovation to cut regular labour requirements and improve the performance and efficiency of the herd. These include Lely Juno feed pushers and Lely Discovery robotic vacuum slurry collectors.

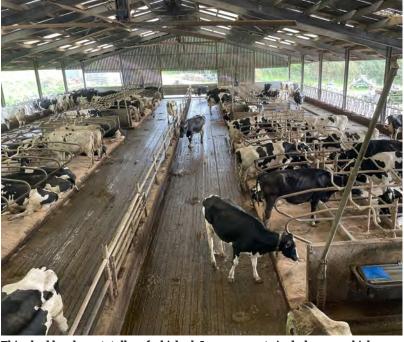
There are also some exciting plans for the future – depending on future grant aid policy and farm profitability. These include automated feeding, an AD plant, solar panels and further building improvements.

Farm performance

Ten years ago the 400-cow herd was milked three times a day through a 20:20 herringbone. Attracting the quality staff needed to run the unit was becoming more difficult. In March 2015 they installed three robots and a further two in 2016. In addition cow numbers have been cut to 300. These are housed in three sheds with five milking groups - three for cows and two for heifers milked through the five Lely A4 robots.

Since then milk yields and herd performance have improved. By 2024 they had reached 12,521 litres a cow a year at 4.16% fat and 3.33% protein. "We have cut cow numbers which has led to happier, healthier cows with higher milk yields," explains Tom, who manages the dairy unit.

The latest figures show Bactoscans at 17 and cell counts of 79,000/ml. Fertility is good with a rolling pregnancy rate of 30.4%, conception rate 55.4% and



This shed has been totally refurbished. Improvements include new cubicles and waterbeds, the Feed Step and rubber matting on all passageways.

The robots have been 100% successful and met all our expectations and more. It has totally changed the lifestyle of the family."

calving index 378 days.

Stock housing facilities are constantly under review and have been improved. Two years ago this involved completely gutting the two main milking sheds and installing new cubicles and replacing the sand bedding with Aquastar water-filled mattresses.

Rubber matting

Robert visited France with his local equipment supplier, nutritionist and vet in February 2024 to look at rubber flooring in cow housing. "There was some scepticism about using rubber mats in all the passageways but we all came away impressed," he remarks.

"The cows we saw were confident walking on rubber and they looked cleaner. One of the big concerns we had was an increase in lameness, but none of the French farmers said this was an issue.

"We had put rubber matting around the entrance and exit to the robots. But our cows lost confidence walking in the passageways when we removed the sand bedding," explains Robert.

So in June 2014 the newest shed housing two milking cow groups had 16mm Magellan rubber matting from Teemore Engineering installed in all the passageway. This has a profiled surface to enhance grip and drainage grooves for the removal of urine. Rubber blades on the Discovery slurry vacuum collectors were modified and replaced with brushes to keep the grooves clear.

farm feature



The Feed Step is new to the UK and is a platform to make feeding at the trough easier and reduce pollution in the building.

"The cows are more confident walking in the passageways and the mats are showing no sign of wear," notes Robert. "We have not seen any increase in lameness and previous problems with white line disease have cleared up."

The Reeds are now keen to put down rubber matting in all the livestock sheds. "Grant aid is a massive help and we hope it will be restored, but we intend to install it in all the sheds for heifers and dry cows. We can justify it without the grant but it will take longer to complete.

"We have had massive interest in the rubber matting and a lot of dairy farmers have visited the farm to see it for themselves," remarks Robert.

Feed Step installation

When in France the group also saw the Feed Step on some of the farms, a new product now being imported by Teemore Engineering. This is a plastic platform constructed next to the feed passage with a height of 115-130mm. The platform is divided every two spaces with a barrier to reduce disruption for the feeding cows. The Reeds decided to install it in the cow milking shed last summer.

'We like it and the cows like it – the principle is very good. When on the platform, the cows are not disturbed by the slurry collector and we have seen less bullying at the feed space," notes Robert.

"There are still a few modifications needed, such as raising the headlocks. The passageways are a little narrow and in an ideal world would be half to a metre wider, but the cows have got used to it and it has brought the benefits for the cows we hoped for."

Continued on page 6



Complete Livestock Housing, Inside and Out.

Teemore solutions for calves, cows, beef and boundary.



Purpose-Built Calf Housing for **Healthier Starts.**

Designed to give youngstock the best possible environment from

Specialist Housing Solutions for Modern Dairy Herds.

Comfort, cow flow, and efficiency at the heart of every build.



Robust Solutions for Efficient Beef Housing

From weaning to finishing, enjoy low-maintenance structures that stand up to the demands of busy production and weather the test of time.

Handling Equipment Designed for Control and Lasting Durability

Efficient, Safe, and Built to Withstand the Demands of Your Herd.



ESTATE FENCING

And if you're finishing things off outside, our Estate Fencing is the ideal addition to any yard or home!

Available in 3, and 5-bar options.



Derrylin, Enniskillen, Co. Fermanagh, N. Ireland, BT92 9BL Tel: 028 6774 8377 (NI/UK) 048 6774 8377 (IRE)

Email: info@teemoreengineering.com www.teemoreengineering.com



Visit our Webiste Today



farm feature

There are many other new technologies and innovations to be adopted or under review on the farm. These include:

Feed efficiency: The feeding system is under review to reduce labour and improve cow performance. Planning permission has been made to build two sheds to cover the four open silage pits. Hopefully, this will be completed for the winter of 2015.

"We struggle with dry matters which fluctuate widely in the winter months on wet and dry days and also in the summer with heat drying out the front of the maize clamps. Storing silage and mixing the TMR undercover will make feeding more consistent," Robert says.

Automated feeding: Robert is also enthusiastic to introduce automated feeding. Following extensive research, he is particularly keen on a self-propelled autonomous feed mixer wagon which has been developed by machinery manufacturer Kuhn. "The concept is brilliant and just what we are looking for," he says.

Named the Aura it is capable of loading silo forages through its milling head, adding other straights and blends from feed bins, then mixing and distributing along the feed passage without any operator intervention.

"As well as keeping silage faces tidy and reducing waste it would cut our labour requirements and improve feeding efficiency," predicts Robert. "I am hoping Kuhn can arrange a visit for me to see one working on a farm."

Automated bedding: Another robotic innovation interesting Robert is Boumatic's FlyPit bedding robot to improve youngstock housing. The



The new cubicles where waterbeds have replaced sand bedding. The rubber matting is designed to drain liquid from passageways quickly.

FlyPit is designed to provide a dry area to lay in and improving pen

Customised to the specific needs of each pen, it reduces straw usage while enhancing the overall cleanliness and comfort of the environment.

"We are looking at a new calf shed and this is something we would be interested in looking at," says Robert.

Anaerobic digestion: A long-term investment scheme under consideration is a AD plant which removes phosphate from farm slurry.

"This is a massive project and commitment but something we are looking at over the next five years," stresses Robert. "The plant would put methane directly into the National Grid and remove phosphorous because we have an over-supply of phosphate on our land. The AD plant would be a valuable source of fertiliser nitrogen."

Solar energy: Solar panels are another project being worked on with grant aid available for this. "We need three quotes for the grant application but it is difficult to get companies to provide these. We have had two firms on the farm but they didn't even bother coming back to me. It is shocking and I have only been able to get one quote so far. So this is progressing very slowly."

Looking to future

Important investment on the farm to continue the advances already made will depend in future on grant availability as well as farm profitability. "Everything is down to money. We need to make a little bit of profit somewhere down the line to pay for future investment," concludes Robert.



Below: Brushes



Unlocking dairy cow potential through welfare

Unlocking a cow's full genetic potential is no easy feat; it requires a carefully orchestrated approach that balances diet, environment, and management. Here we look at some of the entrants to the Cream Awards last year, for insight.

> ven with advanced technologies like robotic milking systems, success depends on precision and attention to detail to promote optimal health, productivity, and welfare.

Last year's Cream Award entrants showed this balance, highlighting remarkable achievements in high-level production while maintaining exceptional welfare standards. A recurring theme among finalists was the critical role of housing and management in influencing cow health, welfare, and productivity.

At Stowell Farms in Wiltshire, replacing their rotary parlour with 12 Lely robots brought immediate benefits. Farm Manager Neil Ridgway adopted an unconventional strategy, targeting 2,000-2,500 litres of production per robot per day and adjusting cow numbers accordingly—departing from the traditional 60 cows per robot model.

"We're below that 60 cows per robot mark—some robots manage 50 cows," Neil explains. "But that's based on higher yields per cow and more frequent visits."

natural behaviours, such as eating, lying

The switch allowed cows to express down, and milking on their own schedule, boosting production. Enhanced nutrition and cow-level data analysis through the robots further bolstered these gains.





At Stowell Farms, the herd yields average 11,200 litres per cow

"These changes

The results speak volumes: cows now visit the robots 3.2 times daily on average, compared to twice under the rotary system. Milking-related standing times dropped from 1.5-2 hours per session to about one hour per day, while yields climbed from 8,500 litres per cow annually to 11,200 litres. Milk solids have slightly decreased to 4.01% fat and 3.21% protein, but total solids per cow have increased by 50kg annually.

Cow comfort

In Derbyshire, Rob Goodwin's Holstein herd saw a 30% yield increase after investing in cow comfort and welfare. Initially, his herd produced 9,000 litres annually through a 20:20 herringbone parlour. Recognising the need to improve housing, Rob invested in 60 sand cubicles by converting an old youngstock building, added LED lighting, and improved ventilation.

A comprehensive overhaul of the main cubicle shed and straw shed

allowed all milkers, dry cows, and transition cows to move to sand bedding. These changes immediately boosted production by 7 litres per cow by improving cow comfort and lying times, with yields climbing further to 12,000 litres annually (at 4.06% butterfat and 3.32% protein) over 12 months.

This backs up research by Fregonesi 2007, which found each hour increase in resting time resulted in a gain of 1.7 kg of milk production.

Rob also attributes much of this success to giving cows more space and encouraging increased lying time and reducing perching behaviour. Improved comfort has also enhanced herd health, with lameness reduced and mastitis cases falling to just seven per 100 cows. Over the past two years, antibiotic use has decreased by 75%, with none required for mastitis or dry cow management. The herd's somatic cell count now averages 145, down from 200 previously.

At Higher Hampton Farm, Axminster, they too have seen improvements to cow performance since improving cow comfort. Their 270 cows are milked through four Lely robots, and since switching to robots they have seen yields increase from 9,500 litres to 12,500 litres. Owner Ben Williams works closely with Nutritionist and Consultant Pete Davis, who explains that getting the facilities right has helped cows achieve their potential.

cow comfort



Craig Sloan Shawmuir Farming

"Cows need to be mobile if they are going to walk to the robots and the trough," Pete comments. "If they are lame, they won't perform. Equally, they need to spend a considerable time lying down."

A review of the housing revealed the team needed to look at cubicle design. They have since adjusted the brisket and head rail to accommodate increasing cow size and have seen a big increase in lying times. Cubicles are bedded weekly with sawdust on mattresses, with the sawdust pulled back twice a day.

Rubber mats were installed in front of the robots where cows turn the most, and a strict foot health programme is followed. Cows are footbathed three times a week as they exit the robots. Currently, a 3% formalin solution is used, but this is being cut back to 1.5%.

Ventilation and heat stress

Another issue identified with the buildings was ventilation, and fans have now been installed. Ben says they have made a huge difference and the cost has been covered by the performance improvements. "When cows are heat-stressed, you usually see the consequences on fertility 2-3 months later, but the really hot weather in 2022 had no effect.

"One thing we have learned is that it is important to keep the fans clean to maintain efficiency, so we clean them regularly."

Ventilation improvements have proven vital for other Cream Award entrants. At Shawsmuir Farming, Dumfriesshire, Robert and Craig Sloan installed a ventilation system in their main cow shed and dry cow facility. Although Scotland does not experience extreme heat, Craig noticed cows struggled with summer humidity, leading to higher mastitis rates during July to September.

Since installation, mastitis rates during summer have halved for three consecutive seasons, now standing at 20 cases per 100 cows.

Nutrition

Maximising intakes is also central to driving performance. This involves not only formulating the right ration but also factors such as adequate feed space per cow, reducing competition, and regularly pushing up feed all play a crucial role.

At Burgate Farm in Scarborough, John and Roger Cook focus on producing highquality milk and maximising milk from forage rather than chasing yield to suit their grass-based system. "This approach means we are producing over 10,000 litres of fat-corrected milk and around 66okg of fat and protein per cow," they explain.





"One thing we have learned is that it is important to keep the fans efficiency, so we clean them regularly"

Their breeding strategy prioritises fat and protein percentages, selecting bulls with positive traits in these areas while avoiding high-yield or extreme Holstein genetics that don't fit their system. Grass constitutes a significant portion of the summer diet, but cows are buffer-fed year-round and receive a 16% dairy compound in the parlour.

"Buffer feeding is done at night, and cows are free to come back inside when they want," John says. Additionally, the herd benefits from a rumen-specific supplement designed to support microbial populations, promoting milk fat synthesis in the udder.

At Stowell Farms, nutritional efficiencies are driven by the investment in their own silaging equipment, enabling optimal timing for a multi-cut grass silage system. "By cutting at the right time, we consistently achieve grass silage quality at 12ME," Farm Manager Neil Ridgway explains.

Feeding is carried out using a selfpropelled mixer wagon to maintain consistency and minimise wastage. Lely Juno robotic feed pushers ensure cows always have access to the ration. Their consistent, high-quality foragebased diet, supports rumen health and production. The ration includes grass, maize, wholecrop silage, and straw.

Impressively, milk from forage has risen from 1,500 litres to 3,400 litres per cow annually, with a concentrate feed rate now at 0.28kg/litre.



Space requirements

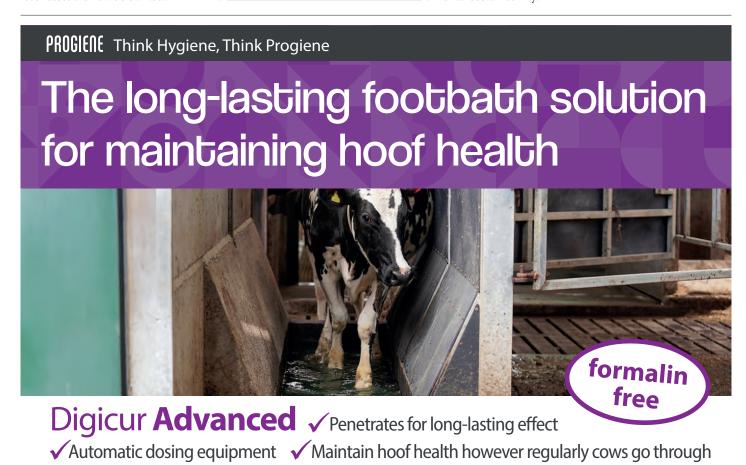
For Brendon and Mark Larwood of Oak House Farm, Norfolk, upgrading their dry cow accommodation has delivered significant results. Providing over 12 square metres of lying space per cow has dramatically improved transition cow health. Retained cleansings have dropped from 11% to 4%, while milk fever cases are now below 1.6%.

"Spacious

"Spacious accommodation has been central to these improvements," Brendon explains, adding that increased dry matter intakes have positively impacted overall fertility.

The benefits of more space are apparent across their herd. Mastitis rates are consistently below 14%, and somatic cell counts are averaging 76. Group size is also carefully managed, with a maximum of 60 cows per group to minimise bullying. They favour sheds with two rows of cubicles to maximise feed fence space and encourage non-competitive feeding behaviour.

The 2024 Cream Award finalists showcase how attention to detail in genetics, nutrition, and cow comfort can transform performance and profitability. By tailoring systems to their herds' specific needs—whether focusing on maximising cow comfort, driving milk from forage, improving transition cow health, or optimising silage quality—they have not only enhanced production but also improved cow welfare and environmental sustainability.



Talk to us directly, or contact your merchant

0808 178 1010 | info@progiene-dairy.com | www.progiene-dairy.com

Targeting feed efficiency for robots

Using a molasses-based liquid feed can increase the efficiency of robotic milking systems, according to a major new trial.

> obotic milking systems continue to grow in popularity bringing a number of benefits including reduced reliance on labour and improved animal welfare. To ensure an adequate return on investment it is vital that efficiency of usage is optimised.

> "The ultimate measure of efficiency of robotic milking systems is milk yield per robot per day," comments Dr Phil Holder from molasses-based blends specialists ED&F Man. "This in turn is a function of milk yield per cow and visits per cow per day. Cows need to be encouraged to make several visits per day with a minimal number of wasted visits.

"Feed has a major influence over visit frequency, with systems usually based on a lower level of TMR and feeding to yield through the robot to drive cows to visit more often.

Offering different compounds and varying feed formulation have been shown to increase efficiency. Now a new trial has demonstrated that including a high-energy molasses-blend as one of the concentrates can positively influence both yield and visit frequency."

A survey of feed advisors showed that the use of liquid feeds in robots is dominated by high-cost

Dr Phil Holder





"Feed has a visit frequency, with systems usually based to vield through the robot to drive cows to visit more often'

glycerine-based products, but molasses-based blends specifically formulated for robotic systems can provide a more cost-effective alternative. Dr Holder suggests a liquid feed can provide more than just energy and can help encourage more traffic through the robot.

Robomol is a high-energy multienergy source molasses blend from ED&F Man specifically formulated for use in robotic milking systems which will help drive visit frequency to increase milk yields.

Developed in conjunction with nutritionists and robot users, it is easy to handle and will pass easily through any robot filters. A cost-effective source of sugars containing over 40% sugars in the dry matter, palatability is further improved through the addition of a banana flavouring.

The sugars help stimulate rumen function and microbial protein production, essential for productive cows. The inclusion of multiple sources of glucose precursors provides the high levels of energy essential for fresh calvers and high yielders in particular. Typical feed rates are 0.5-1.okg/day.

"Every farm faces different challenges when looking to increase efficiency of robotic milking, and for this reason we carried out a major farm study in the UK overseen by independent nutritionist Dr Sophie Parker-Norman, from Big Sky Technical Consultancy, and the results were presented at the recent British Society for Animal Science (BSAS) conference."

The trials were conducted on six farms using robotic milking systems, running for six months. In total there were 1300 cows on the trial and each herd used the product for at least 90 days, generating over 150,000 data points.

Sophie comments that his level of data would have been nearly impossible to gather using traditional methods,

Advertorial



Robomol can be easily fed through any robotic milking system

"Across all farms, the average increase in milk yield was around 2 litres per cow per day"

and Robomol is the only such product supported by independent published trial work.

"One of the great strengths of robotic systems is the volume of consistent, real-time data you can collect," Phil says. "It's not just about whether a product 'works' or not. The real value is in asking where it works and why. That's where the insights lie.

"Each farm presented different challenges - some were understocked, others overstocked. Some had excellent rumination and visit numbers, others struggled with cow traffic and visit frequency. These variances proved critical in understanding where RoboMol made the biggest difference."

Across all farms, the average increase in milk yield was around 2 litres per cow per day, but there were variations between farms. On farms with high stocking rates and low robot visits, the product had the biggest impact on the lower-yielding cows where there was an increase in milking numbers, improved rumination time, and a lift in overall herd average milk yield.

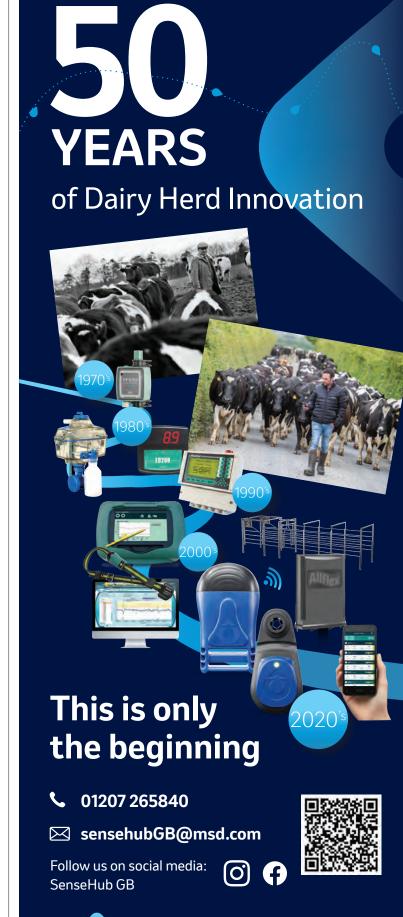
Feeding sugars like those in RoboMol can support a healthier rumen environment, in turn leading to better digestion and energy availability, which is especially critical in cows that are underperforming.

In herds on the trial which were already achieving good robot access and rumination time, RoboMol boosted the top performers. There was an increase in eating time and a reduction in refusal numbers which is when cows go into the robot and get refused for visit-

If milking frequency is still adequate, then fewer refusals is a good thing – as those cows are the 'time wasters' which drive down robot efficiency.

"The trial shows that in addition to being a sugar source, Robomol is also a management tool for robotic systems. Depending on a farm's bottlenecks, RoboMol can work in different ways, either supporting the top end cows, or by lifting the bottom end where visit numbers and rumination are limiting yield

"Incorporating Robomol, which can be easily fed through any robotic milking system, will help improve the ROI on the milking system and deliver an ROI of 4.5:1 on the feed itself."







SenseHub

This product is not intended to diagnose, treat, cure, or prevent any disease in animals. For the diagnosis, treatment, cure, or prevention of disease in animals, you should consult your veterinarian. The accuracy of the data collected and presented through this product is not intended to match that of medical devices or scientific measurement devices. Copyright © 2024 Merck & Co., Inc., Rahway, NJ, USA and its affiliates. All rights reserved. UK-NON-240600024

Automation has helped secure the future of one fourth-generation, family dairy farm

For Devonshire dairy producer Gareth Tape, it was a case of either automating or exiting the dairy industry.

> e reflects: "The 12/12 Herringbone parlour was 30 years old and it was taking us 4.5 hours daily to milk

"The cows were performing well, averaging 10,000 litres, but it was a lot of work," admits Gareth, who farms alongside his father, Les, at Hardisworthy Farm near Bideford in Devon.

In fact, Gareth says he wouldn't be dairying today if they hadn't automated many of the daily tasks to improve work-life balance.

The Tapes built a state-of-the-art robotic milking shed 10 years ago. It is fully equipped with Lely robots to automate milking, floor cleaning and feed pushing.

Gareth credits the move with ridding them of monotonous daily routines and says he is closer to the cows than he has ever been, even though cows are han-

"When we milked through the parlour, two of us had to start at 5.30 am so the shed could be scraped by the time the cows went back to the shed after milking, but now we start at 7.00 am and we are usually done by 5.30 pm," explains Gareth who runs the unit with the help of herd manager, Brendan Harris.

About the shed and technology

The Tapes travelled to Holland looking at robotic farms to get inspiration for the building, but Gareth used a Devonshire shed as a blueprint for his own.

The 165-foot-long shed comprises three rows of head-to-head cubicles for 126 cows.

Cows are milked through two Lely A4 robots - one right-hand facing and one left-hand facing, so the cows exit the robot towards each feed fence. Cows currently average 36 litres daily from 3.1 visits daily.

Gareth opted for self-locking yokes on the feed fence to make it quicker to restrain animals but also installed a treatment area with a foot-trimming crush and race behind the robots.

A transition area has been built for









A Lely Discovery 120 is used to clean the floors. It has saved two hours daily scraping

fresh cows after calving. Cows that require treatment or breeding are automatically segregated into this area via the robot using Lely's Horizon app.

'You are closer to the cows in this system than a conventional system because you have more quality time. I no longer spend hours moving or looking for cows. It's unusual for us to pick cows out unless they haven't been milked," he adds.

Gareth also built a treatment pit for drying off by reusing the rump rails and feeders from the farm's existing parlour.

The slatted shed has underground storage for 330,000 gallons of slurry.

Because cows never leave the building, the Tapes needed a machine to clean the floors with minimal disturbance to the cows.

They initially installed Lely's Discovery 90SW but replaced this with the newer model, Lely's Discovery 120, in January 2022.

Gareth estimates it has saved him two hours daily scraping the shed, the equivalent of £32/day in labour alone.

The Discovery 120 operates hourly, completing several routes within the shed.

"Every two hours, it does a heel-stone route to prevent cows from dragging muck onto the beds," explains Gareth.

"It's a fantastic machine; it's very reliable and durable. It sprays water from the front, which prevents the muck from drying and leaving a cakey layer, which has helped to reduce slippages."

"It's a fantastic machine: it's very reliab It sprays wa from the from which preven the muck from cakey layer

Improvements

When the cows were first milked in the shed in August 2014, the Tapes decided not to purchase a Lely Juno automatic feed pusher to save money.

"Halfway through the project, the grant for the Discovery and Juno was pulled. We were coming down five to six times daily, pushing silage up by hand. Either Dad or I would do the last one at 10.00 pm.

"By October 2014, we installed a Juno, and we feel that's made the biggest improvement to intakes and milk yields."

Milk production has increased 500 litres a cow/year to 10,500 litres since the parlour was switched off. Meanwhile, constituents have improved from 3.9%

Farm facts:

- Milking 115 pedigree Holsteins plus 60 followers
- All-year-round calving, replacement heifers calve in a three-month block from September
- Yielding 10,500 litres of milk at 4.55% butterfat and 3.49% protein
- Supplying Saputo
- Bactoscan: 10
- Somatic cell count: 170,000 cells/ml
- Farming 65 hectares, growing 8ha of maize and the remainder grass.

butterfat and 3.1% protein to 4.55% and 3.49%, respectively.

Alongside more frequent milking and feed pushing, nutrition has had a big role

The Tapes bought a forage wagon to increase grass-silage chop length and started zero grazing to help lift constituents to meet their contract requirements.

Together with Lely's Astronaut Feed Optimiser, which adjusts feed levels according to each cow's milk yield response, these changes have helped reduce feed rates from 0.42kg of feed per litre of milk to 0.35kg.

Gareth says the move to robots has been a win-win for the team and the cows.

"The most noticeable change is how content the cows are, and cow longevity has improved."

Managing a robotic herd during summer

A dry spring could bring a hot summer. High temperatures during these months can put pressure on any dairy system, but those running robotic systems should keep a number of things in mind to minimise stress on the cows.



Bas van Santen

s temperatures increase, cows can begin to show signs of heat stress, affecting both yield and fertility. High yielding cows in robotic systems can be particularly sensitive to rising temperatures, says Bas van Santen, ForFarmers' UK Robotics Product Manager.

He says: "Cows' ideal comfort zone is between 5 and 200C. Even a slight increase in temperature, especially when coupled with high humidity, can trigger heat stress, compromising cow welfare and reducing milk production and

When temperatures are higher, cows may exhibit self-regulating behaviours, such as panting or drooling in an attempt to cool themselves down. Cows can become lethargic, spending more time than usual lying down and therefore not visiting the feed barrier or robot as frequently as usual.

Proactive planning and implementation of heat stress mitigation strategies are essential for safeguarding the welfare and productivity of dairy herds.

Bas explains: "As cows try to cool themselves down, they use up energy, redirecting it away from other functions, including milk production. Yields can drop by 10% during a time of heat stress. Rumen function can be reduced by heat stress too, with the pH of the rumen lowered due to loss of sodium bicarbonate from increased drooling.

"Fertility can also be affected, with studies suggesting that heat stressed cows are 63% less likely to conceive. In addition, cows in the early stages of pregnancy are more likely to suffer from early embryonic loss."



"Cows' ideal comfort zone is between 5 and 20°C. Even a

Water availability

In the summer as temperatures increase, so does the need for water. Uptakes can increase by up to two litres extra per litre of milk produced.

Bas says: "Always ensure ample access to clean and fresh water, as cows may drink considerably more during periods of heat stress. Avoid crowding at water troughs by providing sufficient trough space to meet peak demand."

Handling

Due to the nature of robotic systems, there is minimal handling, but if necessary, during hotter weather always carry out any handling tasks during the coolest parts of the day and avoid crowding

animals into segregation pens for extended periods, advises Bas.

Feeding management

Bas advises feeding is also carried out during cooler parts of the day to minimise effects of heat stress and suggests between 8pm and 8am, to encourage higher feed intakes, while maintaining vields.

He says: "It may be easier to adjust feeding times if your farm is home to automated feeding systems which can be adjusted to deliver more feed during the cooler parts of the day."

Your account manager or nutritionist can advise on whether it is necessary to increase the energy density of diets to encourage dry matter intakes by incorporating concentrates or by-products to compensate for reduced feed intake during hot weather.

"Where possible incorporate higher quality and easily digestible forages into diets to minimise heat generated from fermentation."

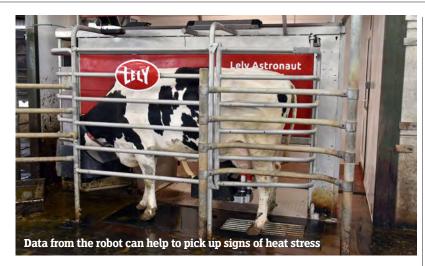
Housing and ventilation

Well-ventilated housing should be maintained to promote airflow and dissipate

Research in the US has suggested low airflow can reduce respiration rates in heat stressed animals by as much as 50%.

He says: "Enhance natural ventilation by modifying building structures if necessary, such as adjusting sideboard spacing. Consider investing in new or





improved fans if natural airflow is insufficient to keep temperatures at a comfortable level.'

Grazing Management

Cows in robotic systems with access to grazing are likely to choose to stay inside when the temperatures are high outside, Bas continues.

He says: "It is still good practice to ensure cows have access to shade and ample shaded water troughs.

"It could also be worth considering

"It is still good practice to have access to shade and ample shaded water troughs."

adjusting paddock rotations so cows can have access to shade throughout the day. During extreme heat, consider keeping cows inside during the hottest times of day to prevent heat stress."

Pay attention to robot data

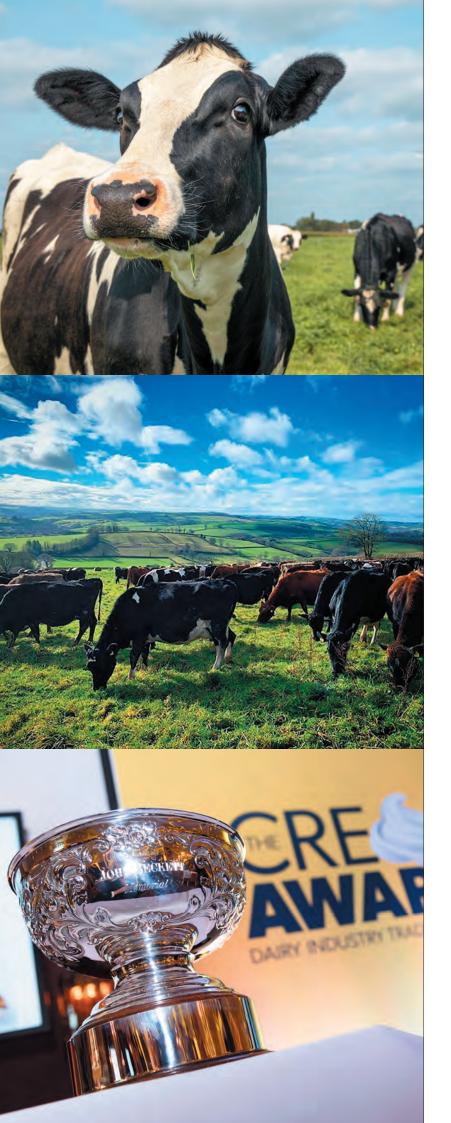
Fortunately, robotic systems have access to more data which can be used to help detect the negative effects of heat stress

Data from the robots or other sensors can pick up on early signs of heat stress in the form of altered behaviour, reduced activity levels or fewer robot visits.

Bas says: "OptiRobot, ForFarmers' robotic data platform, can be a great addition to a farm's toolbox in order to increase the value of your data and means your account manager can help in in spotting issues or trends."









www.creamawards.UK

Thank you to this year's sponsors

Lead sponsor































Who will win the John Beckett Memorial Cup this year?

Previous winners include: Grosvenor Farms (twice winners), Wills Brothers, Arla Foods (twice winners), Volac International, Wensleydale Creamery, Lambert Leonard & May, Mole Valley Farmers, Meadow Foods, Bovaer.

Technology game-changers

Independent Breeding Consultant Kevin Lane looks at some current and future technological developments.



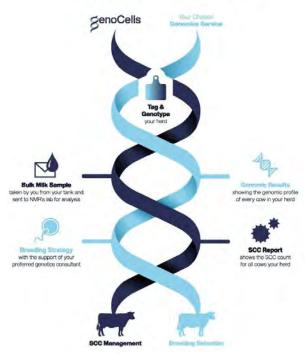
airy farmers have usually fallen into three categories when it comes to technology. The first are those quick to embrace new ideas and tech, the second are those that wait for the early adopters to iron out the faults before getting involved, and the last group are those that are generally happy with way that they run their enterprises and are comfortable with existing methods.

In my own field of cattle breeding there is no doubt that genomics has been the biggest development since the introduction of AI (artificial insemination) although we are now seeing the new AI (artificial intelligence) playing an evergreater role in agriculture.

After the initial introduction of genomics around 15 years ago to predict the proof of a young bull with double the accuracy of parent average, the next stage of testing females has gone from strength to strength.



The How and the Why



"In my own field of cattle breeding there is no doubt that been the biggest development since the AI (artificia insemination)"

Many companies offer testing with a results service to identify superior heifers before they are bred to dairy bulls (and inferior ones that can be mated to beef). Over 110,000 animals were tested in 2024 (up 19% from the previous year) with farms that integrate the technology reporting an average £PLI of £430, some £200 higher than the non-tested average.

GENOCELLS

One of the technologies that has been developed on the back of herd genomic testing of females is GenoCells from NMR, which, I should stress at the outset, does require the entire herd to have a genomic test. The essence of the service is that one bulk milk sample can be tested and the SCC (Somatic Cell Count) contribution for each animal calculated from their genomic profile.

This reduces the need for time-consuming individual cow sampling and of course, this can be done at any time rather than at the official monthly recording. Therefore, immediate action can be taken with problem cows and overall, there can be a reduction in antibiotics and herd dry-cow therapy. Anyone testing with GeneEze (NMR), GeneAdvance (Genus) or Zoetis (Clarifide / Clarifide Plus) can access the service, which works as follows.

Once the entire herd is genotyped a bulk sample (taken by you) from your bulk tank is sent to the NMR lab for analysis. The SCC report will show the cell count for all the cows in milk in a similar way to regular milk recording. Getting the entire herd results with one sample is a huge time saver which can

technology

result in a quicker approach to problem cows, increasing the value of genomic testing and improve animal welfare.

It helps your vet/consultant identify mastitis issues much quicker and helps provide targeted treatments, overall reducing antibiotic use. With results back in just a few days it's also useful to do a spot check on the back of an SCC spike to quickly target problem cows and bring bulk SCC under control (and possibly restore bonuses).

HOOF HEALTH MONITORING

Lameness is one of the most common welfare and productivity issues in dairy farming. AI-powered solutions are being developed to bring precision and proactivity into hoof care, reducing unnecessary suffering for the animals and increased workload for farmers.

AI powered hoof health monitoring is an innovative technology that uses artificial intelligence, sensors, AI powered thermal imaging and data analytics to monitor the hoof health of dairy cows in real time.

Here's a breakdown of what it is, how it works, and the benefits.

It's a smart system that continuously tracks signs of hoof problems, such as lameness, ulcers, infections, or abnormal gait patterns, by using a combination of pressure-sensitive mats, cameras for gait analysis, wearable sensors and machine learning algorithms. The AI analyses data to detect early signs of lameness or hoof disorders—often before they're visible to the human eye.

As cows walk over special mats or are recorded on video, the systems capture pressure, stride length, walking speed and more, and machine learning models compare the cow's gait and hoof behaviour to healthy reference points. If a potential issue is detected, the system sends an alert to the farmer or vet, allowing early intervention and thereby saving money on lameness treatments, avoiding antibiotic cost for treatment and consequential milk loss, and helping the animal to recover more quickly.

Over time, machine learning builds individual hoof health profiles, helping track improvements or problems in individuals. The early detection helps to identify problems before they lead to more severe issues, which in turn can reduce treatment costs and productivity loss.

The welfare issue should not be underestimated with healthy hooves equalling happy cows and more mobile animals. The data can drive decisions that the farmer makes and the information





"The welfare issue should not be underestima with healthy hooves equalling happy cows and more

provided will save labour as it will help identify issues without random checking to identify problems.

One of the initiatives looking at this is The Cattle Hoof Monitor Project who use thermal imaging technology to detect subtle changes in temperature in each feet and leg of each animal, which enables any appropriate treatments to be carried out before there is further deterioration in the condition.

The cost of lameness is said to be over £50 million a year and the trials on a herd in the south-west at the UK Agri-Tech Centre will be expanded to large commercial farms once the data has been validated. With lameness present in one form or another on every dairy farm, this sort of technology has the potential to be a game changer by identifying lameness at a much earlier stage, effecting more targeted treatments and reducing costs of milk loss and medical intervention, and improving cow welfare.

HERDVISION

A stockman's eye is essential in detecting everything from lameness to calving to inconsistent behaviour. However no stockman can check cows constantly and that is where a new generation of technology is helping. Body Condition Scoring (BCS) is a subjective exercise within certain parameters but is time consuming to do and analyse.

One of the systems on the market to help with this is HerdVision, a digital camera set-up coupled with cloud



computing to help find problem cows before they are obvious to the trained eye. Offering both BCS and Mobility Scoring, HerdVision measures the body condition of an animal each time it passes under the camera - usually twice a day on exiting the milking parlour.

Once the camera is set up and has 'learnt' the cows then the data, via 'inbox' analysis and cloud computing, will be fed back in real time to a phone or computer to enable management decisions to be taken or data shared with third parties such as a vet or nutritionist. As with manual BCS the important value is not the actual score but the changes in the animal from day to day and with accurate and non-subjective values being presented to the user, early intervention can help negate any welfare or performance issues.

Alongside BCS scoring the camera is also trained to measure the locomotion of the animal to enhance early detection of lame cows, or cows that have an alteration in their walking pattern indicating an issue with foot or leg. Live mobility scoring enables the farmer or staff to physically check the animal and offer early treatment if applicable, which should ensure both quick recovery and minimal loss of productivity.

LELY ZETA

Robot companies are continually improving their systems to make cow management easier and ultimately more efficient and profitable. Lely Zeta is a revolutionary concept using camera, LED lighting, AI and smart algorithms. This opens up a new era in monitoring animals 24 hours a day with hanging cameras that link together to create an overall view of the herd from above.

The AI and software enables Zeta to recognise cows, their location and behaviour to improve management and cow welfare. A key part of the system is the LED lighting which has a 'full moon' nighttime mode to enable it to work around the clock.

The system will help with heat detection, walking patterns and therefore lameness, and it also offers an above-pen camera for calving boxes, currently being field tested, to alert the user of a calving event as it has been AI trained to recognise the stages of calving. All collected data is processed and available in a phone app with real-time data and alerts.

For further information please contact the companies concerned.

Robotic Milking # Systems

The UK's first information platform and consultancy service dedicated to robotic milking

We can give you independent advise on all of the following:

> **Barn layouts Tendering Nutrition Finance Used equipment**

Want to know more? Then please go to:

www.roboticmilkingsystems.com Or call us: 07943 838101







Merits of milk samples via shuttles

NMR's shuttle service enables individual cow management in robotic milking system.

> hree years on from moving to a robotics system, Andrew Sutton and his herd managers Phil Sellars and Stephen Reade have no regrets for making the change, particularly as they're able to record a wealth of individual cow data. With no extra hassle, the service relays this seamlessly to the herd's vet and nutritionist so that cow management can continue to improve.

> The 100-cow herd of pedigree Holsteins at Bent Farm, Astbury, near Congleton, is managed with a high input high output system and cows are housed all year round. Current annual average yield is 11,810 of milk at 4.1% butterfat and 3.15% protein, and the somatic cell count average is 173,000 cells/ml.

> Around 1,250,000 litres of milk a year are sold to Manchester-based Creamline Dairies for the liquid market.

Andrew sees individual cow records as essential for his business. "We're not paid a bonus for higher constituent milk so that's not a driver, but we're keen to use each cow's details in breeding, health and nutrition decisions and improve herd efficiency," he says.

He looked at the option of buying kit for taking cow milk samples each month but decided against it. "It would have been a hefty investment - in the region of £7,000 to £8,000 - in some kit we'd use once a month, and we'd have to carry it out ourselves and pack off samples to a lab. We were trying to reduce the extra jobs, not add more."

Instead, he went down the route of using NMR's shuttle hire service where their trained technician delivers the shuttle and connects it up to the robot.

His robot has two stalls, so two shuttles are needed to take samples. These take milk samples from each cow in a 24-hour period. It's then collected along with the individual milk samples which are delivered to the NMR laboratory for testing. "It's really good value as it's not just the kit and the testing, but the service that supports it," he says, adding that for him and his team it's hassle free and reliable. "I don't even have to be there when our NMR area



Andrew Sutton

"It would have been a hefty investment in the region of £7,000 to **£8,000** - in some kit we'd a month

co-ordinator Hannah Titterton delivers and collects the shuttle - she sorts it all out and takes the samples each month."

Alongside milk constituents, milk samples are also tested for Johne's via NMR's HerdWise quarterly screening

Andrew uses UniformAgri so the results are fed back into this program directly and are also available to third parties, including his vet and nutritionist.

"I allow them to access the data through a livelink. If we're doing a trial with a particular company, I also allow them to access the data for analysis.

"This means they have real time information to help us monitor and manage the herd as accurately as possible."

Andrew and his team are working closely with their vets, Sandstone Vet Group, and nutritionist Clayton Barber from GroAgri, to monitor a combination of KPIs with the aim of improving animal health, performance and efficiency.

KPIs include fertility, cell counts, Johne's Disease and protein interceptors, and many more. NMR data from recordings, which combine real time information directly from the robot and Uniform Agri, are used here. "We need routine and accurate records for each cow to do this work successfully," he adds.

Cow data accessed from the milk sample are also valuable on farm. Phil and Steve look after the breeding programme, and select sires based on each cow's production and health status, as well as her type. Sexed dairy semen is used.

Bulls are selected to use in this allyear-round calving herd that combine good production, type and temperament - which is important for a robotic

milk testing



Left: Two shuttles are used - one for each robot stall. Right: Hannah Titterton NMR carefully taking out the milk samples and placing them in order ready to be numbered up

"The NMR shuttle service is slick, and I get the use of their machines without the investment or the upkeep."

system. "Stature is important too – we have a good market for our heifers that are strong, and have uniform udders and good teat placement, alongside good parental production data."

The Rowaton herd was established by Andrew's grandfather Geoff in the early 60s and progressed by his father Roger. Andrew maintains its pedigree status and classifies cows each year. "Primarily we run the herd commercially, but the pedigree data adds value when we sell the youngstock," he adds.

A bTB breakdown recently saw cow numbers on the farm increase, adding pressure to the robotic system and meaning a higher-than-normal proportion of first lactation heifers have been retained.

Now clear of bTB, the herd is stabilising with the intention to double robotic capacity this year, with the addition of a second Boumatic double box machine which has two stalls side-by-side and one robotic arm. "It means we'll need four shuttles each month, but it still doesn't tempt me to buy my own. The NMR shuttle service is slick, and I get the use of their machines without the investment or the upkeep. My only requirement is logging one simple WhatsApp message to say when the shuttle will be on farm each month."





dan.kingsland@waikatomilking.com +7 983 961 773

MOHAMMED KHAWAJA - UK NTH mohammed.khawaia@waikatomilking.com +7 398 065 388

waikatomilking.com





The right system, the right life

Finding the right grazing and calving system sets your calves up for life.



Chris Bailey, farmer at Moorhouse Hall Farm, alongside his parents John and Kate.

valuating whether your grazing and calving systems are supporting your lifestyle and priorities can be challenging. System changes often come with significant costs and don't always deliver clear benefits for herd performance.

Taking the time to reflect on whether your current approach aligns with what matters most to you - whether this is profitability, time with family, environmental stewardship, or reduced stress - can lead to more informed, confident decisions. With the right planning, it's possible to transition towards systems that not only work for your herd but also for your life.

Case study: Moorhouse Hall Farm, Cumbria

Originally tenant farmers in Lancashire, the Bailey family purchased Moorhouse Hall Farm in 2022. Since then, they've been exploring ways to adapt their grazing and calving systems to optimise cow performance while better suiting their lifestyle.

Kate and John are planning for a future with fewer hours on the farm as they move toward part-retirement. Their son Chris works part time as a vet and has a young family, and his wife Helen is also a vet. Together, they need a system that continues to deliver strong herd performance while fitting around busy personal lives.

"We're currently managing the farm between myself, my parents and my wife," said Chris. "We calve in blocks throughout the year, mainly during the summer months. The cows are allowed to graze outdoors, and we aim for five cuts of silage each year.

Right now, we usually finish milking around 6:00pm or later, but with a young family, I'd really like to finish earlier. We have never employed staff, and ideally, we'd like to keep it that way."

John added, "Maximising what we already have and improving efficiency is our main goal. That way, we can free up more time for family. We believe that reviewing our current grazing and calving systems is key to achieving that."

In 2023, the Bailey family joined AHDB's Strategic Dairy Farm



"Maximising main goal

programme. As part of this, they've been working with Owen Atkinson from Dairy Veterinary Consultancy and their farm's steering group to evaluate their current systems and to explore how to get more from their land and livestock

Owen outlined several potential options for the Baileys' future system:

- 1. Transition to an autumn-blockcalving herd with greater reliance on
- 2. Install a robotic milking system and house cows year-round, using land primarily for high-quality silage.
- 3. Continue with their current approach - calving in seasonal blocks throughout the year, with some grazing but primarily focusing on silage.

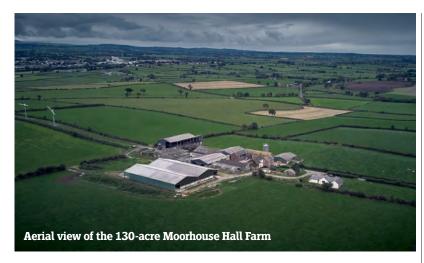
"Their current cost of production (CFP) is around 43 ppl, in part due to high finance costs," Owen explained. "Ideally, a higher overall milk output would dilute these fixed overheads. But the farm is limited in its ability to significantly expand the cow numbers quickly due to the policy of home-producing replacements.

The size of the grazing platform around the main farm is also limiting to accommodate a much larger autumnblock system. So, an alternative is to have a more modest herd expansion while also increasing yields per cow, supported by sourcing more forage from land further afield.

One proposal would involve installing a robotic milking system and expanding the herd to 170 cows, which could dilute their fixed overheads by 2.7 ppl, even accounting for the extra borrowing required. This set-up could still include partial grazing for at least four months of the year, for four hours a day using strip grazing.

The cows would be capable of producing approximately 11,500 litres per year each due to increased milking frequency. This could entail an estimated £405,000 capital investment – equivalent to an added 1.7 ppl at 8% interest,

farm story



but overall a more healthy retained profit through diluting some of the other costs," said Owen.

Chris added, "We'd love to put in robots - it would give us more time with our families, but the idea of taking on that level of debt is daunting, especially because we are still paying off the mortgage on Moorhouse Hall Farm. For now, we will focus on improving our grazing management, and maybe one day we will put in a robotic milking system."

"We'd love to put in robots – it would give us more time witl

If the Baileys decided to shift to an autumn-block-calving system, they'd need to tighten their calving window and potentially sell cows that don't fit the block. While they would prefer to retain every animal, they recognise the potential benefits of paddock grazing - not only in reducing cost per litre but also in freeing up capital to pay off their mortgage sooner.

Follow their Strategic Dairy Farm journey and read more about their farm at ahdb.org.uk/farm-excellence/dairy

Farm snapshot

Moorhouse Hall Farm is home to 150 purebred, genomic-tested Holsteins within the top 5% for £PLI. These cows average 10,200 litres per cow, per year, at 4.17% butterfat and 3.36% protein.

The herd has been closed for more than 70 years, using replacement heifers from their milking cows to continue the strong line of genetics.



HIGH PERFORMANCE DAIRY FARMS ... start your awards entry for the 2025 Cream Awards today

Deadline for entries is end of May, contact the organiser for help with a nomination or entry e: caroline@calderwood.cc or go to www.creamawards.UK

MOST EFFICIENT AMS FARM

Sponsored by: Advanced Ruminant Nutrition



Advanced Ruminant Nutrition partners with the Cream Awards for the second year running to sponsor the "Most Efficient AMS System".

A popular category in the 2024 awards, this prize recognises the vital role robotic milking systems (AMS) play in transforming the dairy industry, highlighting the commitment of farmers who are adopting innovative technologies for enhanced efficiency and sustainability.

The team at Advanced Ruminant Nutrition have over ten years of experience in robotic farming and are uniquely positioned to support this award. Their expertise encompasses not only the technical aspects of AMS but also nutrition and management strategies tailored for optimal farm performance. The company's dedicated division, Advanced Robot, works closely with farmers to maximise their investment in robotic systems. Mr Eoghan Mullery, Technical Director at the company will lead the judging panel.

"We had some fantastic entries last year and we are really looking forward to receiving the entries for 2025. Whilst we had a lot of high output systems entering, we would also encourage those from medium output systems too, as they can also demonstrate efficiencies within a robotic system."

The award is open to all farms utilising robotic milking systems, whether they are retrofits or newly established operations. Entrants need to demonstrate excellence in several key areas, including animal health and welfare, while aiming for the ultimate goal of achieving the most efficient and sustainable system possible.

"The industry has seen an increase in the uptake of robotic systems by a diverse range of farmers adopting this technology, underscoring a collective push towards innovation and efficiency in dairy farming. It's the dedication of these farmers, especially as they prioritise the health and welfare of their cows, who deserve recognition."

Producers and herd managers are encouraged to enter on the website, with farm vets, nutritionists or other farm business stakeholders eligible to nominate suitable candidates by visiting creamawards.uk. Good luck!

HIGH FEED EFFICIENCY AWARD

Sponsored by: **KW Feeds**



What are our judges looking for?

The essential ingredient to a high performance, healthy herd is accurate nutrition. The ability to achieve the optimum balance is the key to driving feed efficiency. Feed selection and profitability go hand in hand - the correct feeding regime makes a significant difference to milk output, milk quality and of course the sustainability of your herd. It is essential that up-to-date KPIs and costings are submitted with your entry.





NOMINATE SOMEONE YOU KNOW, OR PUT YOUR FARM FORWARD VWW.CREAMAWARDS.UK

FERTILITY HEALTH & **WELFARE AWARD**

Sponsored by: VOLAC MILK REPLACERS (Feed for Growth)



What are our judges looking for?

Candidates should have an understanding and evidence of engineering characteristics that promote milk production, increase solids, health & management traits that can be passed to the next generation of cows. We are looking for dairy farmers who value an annual calving interval and link it to boosting farm profitability, monitoring genetic improvement and extra milk in early lactation. This is an award for high and consistent fertility rates on farm, proactive breeding strategies in the unit, high levels of health & hygiene.

HIGH PERFORMANCE DAIRY FARM

Sponsored by: Arla Foods



What are our judges looking for?

We are looking for a farm with high levels of production and cost efficiency across the board plus a strong plan on creating a sustainable future, the highest standards of welfare, the candidate will also be conscious to minimise the use of antibiotics. The above average all-round performance would be demonstrated by KPI records of good physical performance and excellent financial results represented by yearon-year low production costs in pence per litre (eg NMR records, or other equivalent). Results will achieved through effective management of all aspects of the dairy enterprise & examples of sustainability on farm.



Maximising robot returns

We talk to the Petherick family who improved cow health on their farm to increase output from by 22% in just six months.

> ichard and Rachael Petherick, along with their family milk 170 Holsteins at Aldercombe Barton Farm. On a cheese contract to Saputo, they milk through 3 Lely Robots. The herd is fed a grassbased silage and calve all year round.

> Richard is passionate about optimising the genetics of his herd. About a year ago, he noticed his cows weren't performing to their full milking potential.

"We'd invested so much time, money and effort into the robots, and we were determined to maximise our return on investment. After an initial milk increase when we transitioned onto the robots, things began to plateau," explains Richard.

With several health challenges affecting the herd, Richard sought expert advice to enhance animal health and performance. He enlisted the help of the Advanced Ruminant Nutrition team, to assess the cows and hopefully provide some answers.

The team approached the cows' health with a comprehensive perspective, addressing every aspect of the operation, including nutrition, robot settings, and cow environment.

Central to the company's strategy is a whole-farm approach, where the team analyses robot data in tandem with observing cow behaviour and health. This allows them to identify and address the key bottlenecks affecting herd health. By prioritising and resolving these critical issues, the team ensures continuous improvement in both animal health and productivity.

"Thankfully, we are now back on track - the team came in and looked at the robot settings and really interrogated the data to pinpoint what we needed to do to bring the milk back up, all whilst improving animal health," says Richard.

Scott Carter, Technical Manager at ARN explains, "It was important for us to look at the farm KPIs alongside the data extracted from the robots. Richard needed to not only increase milk yield but focus on milk protein levels too,

Farm Stats

- Increased milk production by 22%
- Milk protein increasing from 3.2% to 3.5%



Richard and Rachael Petherick

"We'd invested so much time, money and effort into the robots, and we were determined to maximise our return on investment.

whilst improving animal health to maximise margin and ultimately the profitability of the herd.

"We adjusted the robot settings and the diet initially to increase visits to the robot, which then increased the yields and the solids. When we first started working with the herd, we knew they had the potential to reach 40Kg, they are now successfully achieving this.

"The cows have just taken off since Advanced Ruminant Nutrition have been feeding them," says Richard.

A focus on the dry cows, as a key area, saw the introduction on DC X-Zel into the diet. And, while they weren't having many issues post-calving, it's a much more reliable system. The mineral binder is scientifically proven to ensure adequate calcium is available to the cows at the point of calving. Richard notes, "It's a simple, safe system and the cows seem to cleanse much better."

As well as looking at the robot settings, the team looked at management protocols and the cow environment. For example, the family have recently installed new lighting in the robot shed with red and white light options.

Richard explains that it's the whole farm, whole team approach which has positively impacted the cows.

"It's great to have the full team on board, I can see from the robot software that Scott is monitoring the cows every day and knows how to get the best out of the robot data. Marc Harvey is on farm most weeks assessing the cows and advising on the cow environment, including the new lighting in the robot shed. Liz is regularly on farm to manage the youngstock rearing too," comments Richard.

Heifer rearing manager Liz Newman comments, "The team on the farm have been great at implementing the suggestions we've given them for youngstock management. This has included introducing a calf milk replacer (CMR) program to best suit their KPI's for dairy heifers, alongside a tailored plan for beef calves, which has helped them achieve top market prices.

"We monitored passive transfer in calves, identifying those calves with lower passive transfer had reduced weight gains, even if they showed no clinical signs of disease. We have therefore put more focus onto colostrum management, including enriching cows' colostrum.

"Feeding and weaning plans were revised to ensure calves were not seeing a check in performance after weaning, and we adjusted concentrate and forage feeding to promote health and growth, ensuring continued health and growth.

"Additionally, we introduced cost-effective TMR diets for heifers over six months old, driving better growth rates."

As with everything else, the approach to youngstock considers the whole farm business and by moitoring youngstock closely and analysing the data, the team have been able to deliver tangible results. This is a continual process, and the team aim to ensure they are serving animals at the right time and have the right numbers coming through to support the needs of the milking herd.

"The whole team approach has been key at Aldercombe Barton Farm to significantly improve overall cow health and enhance milk production by 22%. Richard and his team have really taken on board all the advice given to them to make it work for their farm. They are dedicated to working with us to continually monitor the cows, so they can adapt well to any changes and make improvements for the future," concludes Scott.

Time to embrace new formulations for foot bathing

Still opting for formalin for footbathing? Other easier-to-use, non-carcinogenic, low-odour options come in at the same cost.

> oot health and reducing lameness with regular hoof care is one of the cornerstones of productivity and animal welfare for dairy herds. One of the most effective tools for preventing and controlling hoof problems-especially lameness caused by infectious diseases—is regular footbathing. While it may seem like a routine chore, foot bathing plays a crucial role in maintaining herd health, milk yield, and overall farm profitability.

Why footbath cows?

Day-to-day cows are on their feet a lot-walking to feed, water, milking parlours, and in loafing areas. Hoof issues, which can lead to lameness, can be as a result of damage in the environment, a bruised sole or puncture wound, or infectious conditions especially digital dermatitis, foot rot, and interdigital dermatitis.

Any hoof or lameness problem is not only painful but can lead to:

- Reduced feed intake
- Decreased milk production
- Fertility issues
- Early culling

A regular footbathing program can drastically reduce the incidence and severity of these issues by preventing pathogen buildup and promoting hoof health.

The frequency of footbathing matters and whole herd mobility scoring every six to eight weeks will help set a baseline for a herd, after which a hoof health plan can be made.

Some experts estimate that for every cow with a mobility score of three, there's probably another two or three with scores hovering around two which may be going unseen.

"Increasingly, we see that farmers are opting to bring in the experts," says Progiene's Alison Clark. "This could be a mobility mentor, a hoof trimmer or vet qualified to trim hooves. And the investment in expertise and a consistent approach over time pays off - lameness costs £3.30.cow/day and these losses soon mount up."



"Increasingly, we see that farmers are opting to bring in the experts.

Once assessed and with lameness records checked, a herd can be categorised as 'low prevalence' or 'high prevalence'.

Foot bathing regime:

1. Low prevalence herds:

Footbathing after four consecutive milkings every two weeks can be effective.

2. High prevalence herds:

Daily footbathing is recommended or, at a minimum and especially during wet periods, at least three - five times per week.

"Ineffective foot bathing can make infectious conditions worse by helping pathogens spread," points out Alison Clark. "Also, some formulations reduce the hoof's natural defences, paving the way for infection to take hold."

Key points:

- Maintain a good flow of cows and make sure feet are in contact with the disinfectant solution for long enough.
- Calculate the amount of disinfectant needed for the correct dilution rate for your footbath size - generally, the best designs for narrow and wide footbaths.
- Good cow flow through a footbath reduces splashing, which wastes less solution while also reducing the risk of teat contamination.

"There is a range of chemicals being used in foot baths, with many still opting for old-fashioned formalin, but this should come with a warning - over time, it can compromise the integrity of the hoof and it is banned in a few countries due to possible human health problems from carcinogenic fumes if not handled

Advertorial

carefully. Used at a 2% dilution rate may be less effective than the more standard 4% or 5% dilution rate."

Digicur Advanced is a highly concentrated triple action, broad spectrum liquid disinfectant solution containing glutaraldehyde, chelated copper and zinc and can be used for cattle, sheep and goats.

"It contains a unique patented chelate which keeps the copper and zinc in suspension meaning that they work very quickly and breakdowns in the environment." explains Alison. "Digicur Advanced is used at a 2% dilution which is two litres/100 litres of water and starts to work the moment the hoof comes into contact with it. A unique feature is its long-cling formulation - it contains heavy duty surfactants which means it clings to the hooves after footbathing.

"In contrast to formalin, Digicur Advanced is not carcinogenic making it far less dangerous to the operator when mixing it," she adds. "And for cows that don't like the pungent aroma of formalin, Digicur Advanced has a much-reduced odour meaning they are often happier to walk through the foot bath.

"Whatever product you choose, one golden rule to remember is to have one litre of solution per cow; this means emptying or replenishing the solution after 100 cows have walked through 100 litres of solution," Alison explains.

Per 100 litre footbath				
Formalin @ 5% inclusion (5 litres/100 litres water)	Digicur Advanced @ 2% inclusion (2 litres/100 litres water)			
92p to 99p/litre	£2.45/litre			
Cost per 100 litre solution = £4.60-£4.96	Cost per 100 litre solution = £4.90			
Cost per cow = 4.6p	Cost per cow = 4.9p			

Costs

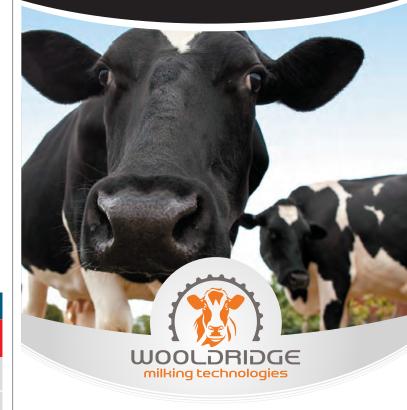
Digicur Advanced is used at 2% (2 litres per 100 litres water) inclusion and formalin is usually used at a 5% (5 litres per 100 litres water) dilution rate. Using Digicur Advanced works out at around the same cost/cow when compared to formalin at 5%, and it becomes even more cost-effective when compared to formalin used at 10% inclusion rate.

Digicur Advanced is available in five, 25, 200 and 1,000 litre pack sizes. The chemical components of it are defined as readily biodegradable and it is anticipated that it will achieve 80% degradation in 28 days; also the chelated copper component in the formulation is inherently biodegradable.

Go to www.progiene-dairy.com or email info@progiene-dairy.com for more information.



Shaping the future of milking parlours



Doing the dirty work... so you don't have to.

If you're looking for a solution for keeping your Cows clean, meet the latest innovation: the JOZ Barn-E manure robot. This revolutionary machine is specially designed for barns with solid floors.



Fast efficient robotic milking. From teat to tank.

Fullwood M²erlin farmers have plenty of choice when it comes to having the right information at the right time to manage their dairy herd. The options available provide everything from basic data on the operation of the robot right through to in-line milk analysis.

For more information call us on:

01453 798090 or **07595 718592** or email **hello@milkingparlour.co.uk**

Making life easier for dairy farmers in the UK and beyond

Build the right foundation for your rotary milking system.



The ECR-S is a robust, easy to use and dependable ACR.

otary milking systems have revolutionised the way farmers manage and optimise their milk production. While these systems enhance efficiency, ensuring your platform is built on the right foundation is crucial for sustained performance and long-term productivity.

A platform is the starting point for constructing a robust, efficient, and scalable rotary milking system that can solve your farm's unique challenges and withstand the rigours of daily farm life. The right foundation serves as the cornerstone of your dairy operation.

When it comes to the milking platform, your choice of materials, construction methods, and scalability options will play a pivotal role in determining the dairy farm's long-term

There are four key considerations for building a good foundation for a rotary milking system with the right platform

A platform must handle heavy loads, constant movement, and harsh conditions. Composite materials are known to provide a strong, durable, and lightweight solution that ensures longevity without compromising structural integrity. A well-designed platform also improves cow flow and milking efficiency by facilitating a smooth entry and exit. This helps by reducing stress and optimising the layout to cut handling time and labour, boosting productivity for all.

The right platform should not only meet current needs but also allow for future growth, as scalability enables farmers to adapt to larger herds and changing market demands without costly modifications.

The right platform also sets the stage for integrating automation technologies into the dairy operation. As technology continues to advance, it is important to have a platform that can accommodate the latest labour-saving and productivity-enhancing automation technologies:

Key systems include Electronic Cup Removers (ECRs), which handle



milking completion automatically, reducing the risk of over- or undermilking; Animal Identification Systems, for monitoring individual performance and herd health; and Automated Teat Spraying Systems, which ensure consistent teat care before and after milking, reducing mastitis risk and improving udder health.

To support overall efficiency, Dairy Management Systems collect and analyse data to guide decisions around performance, cow health, and milk quality. Automated Washing Systems maintain equipment hygiene with minimal input, while Automated Pre-Stimulation and Udder Health Monitoring improve milk let-down, cow comfort, and overall udder health.

Together, these technologies streamline daily routines, reduce labour demands, and support better animal health. When built into a well-designed platform, they deliver a more efficient, productive, and future-ready milking operation.

Dairy farming is not just about overcoming your farm's unique challenges today; it's about future-proofing your operation to stay at the forefront of innovation and efficiency. With the right tailored solution, you can seamlessly adapt to evolving industry trends, automation advancements, and changes in herd size. This keeps your dairy operation competitive and profitable for years to come.

https://waikatomilking.com/







Ensuring robotic systems perform

In dairying, it's the attention to detail which delivers the extra performance gains and the case is no different when it comes to robotic systems, says Ben Watts, Head of Technical and Innovation at Kite Consulting.



Ben Watts

hether you are about to invest in a brandnew set up, or you have already taken the plunge but feel your robots aren't working well enough," explains Ben Watts, "There are three pillars which really affect performance in a robotic milking system: people, design and management."

Firstly, addressing the subject of people, Ben highlights how success of any dairy system is hinged on those who operate it.

"Whatever your method of milking, building the right team is essential while providing relevant training in order to be efficient as possible. Robotic herds are no different. We need competent people to do the jobs which robots won't be doing. This includes fetching cows, serving and calving, maintaining farm cleanliness, hygiene, robot servicing, treating cows or calling the vet.

"Contrary to some beliefs, and dependent on the parlour being replaced, installing robots is unlikely to reduce labour considerably, especially if there are other bottlenecks in the system. If you don't feel your robots are performing as they should, the first area we would review is the way the team works with the cows and the milking machines."

Secondly, a large proportion of cow performance and genuine satisfaction with a robotic system comes down to the space which robots are installed into. Housing and system design makes a massive difference to the success of robotic milking ventures, and the systems which work the best have had extra time, thought and planning invested

"We see many examples where robots have been 'shoehorned' into an existing space with little investment into the overall shed design, ultimately setting a bar for limited cow performance, irrelevant of their genetic potential. The slight increase in cost associated with these critical steps in design consultation and consideration is soon paid off by having cows settle quicker into the new system, and go on to give more milk - often with higher solids.'





Keep a watchful eye on data from the robot

We need the jobs w

In retrofitted sheds, a guided system could help cow flow, explains Ben. "If a robot manufacturer advises a guided system, make sure it can perform like a motorway, rather than roadworks with temporary traffic lights. Be careful not to rush through the planning process without seeking advice.

Look at other systems, discuss your plans with other farmers and consultants; a confused system results in confused cows. It is also important to consider who will be available to help transition cows into the new system and routine and embed into a new normal."

When choosing a manufacturer, it can be useful to use one which has an experienced design team who are able to effectively communicate a design concept to you ahead of any other planning, suggest Ben. Access to reliable and realistic building contractors with ability to flex as the project unfolds will also benefit a project.

Finally, day-to-day management of the system needs to consider available external expertise and your ability to react to the data the system provides. Before committing to a robot colour, Ben advises to carefully consider the availability of local service back-up and the level of training and competency of engineers and the wider support team.

"There continues to be a fine balance between what is right or easy for the people, compared to what the cow requires to perform at her best. Daily operations and nutrition need to be tailored to your circumstances and herd, working with the system you've got, rather than against it. Rumen health is paramount and needs to be the central focus.

"We've historically been told each robot can cope with 60 plus cows. In truth, we often compromise health, fertility and milk production because of over-stocking. Never assume that a system working well with 40 cows per robot will continue to with 60.

"Keep a watchful eye on the data any time you make a change and see how performance is affected. Likewise, if you see a dip in performance and you don't know why, be curious and strive to make tweaks to get back on track. Small changes really can add up to make a big difference."



Robomol: Energising Every Visit



- NEW cost-effective liquid feed specifically designed for use in robots
- Multiple energy sources and glucose precursors to provide high levels of energy, ideal for fresh calvers and high yielders
- Proven to increase robot visits which helps drive yields
- Effective management tool to optimise robot milking performance
- Available in IBC's





Want to know more?

Richard Dobson 07764 344716

Angela Sutherby 07957 642669

Danielle Goatley 07710 075824

Georgina Chapman 07485 192774

Nutritionist | Technical Support Manager

www.edfmanliquidproductsuk.com

X@EDFMan_Molasses ⊚ edfmanliquidproductsuk

FED&F Man Liquid Products UK





Upskilling dairy's next gen in farm technology



Knowing and seeing what's available when it comes to dairy technology is vital for making the right choices

> nderstanding the latest farm technology and seeing how it fits into the dairy management system on individual farms is vital, and particularly for the next generation of dairy farmers.

Most of our dairy farms are equipped with some sort of digital technology - at very least a computer or tablet, and on many units, cameras, collars, robotic milking systems and cleaners, as well as dairy software systems, and dedicated apps are part of the set-up.

Today there's a constant stream of new innovations and digital 'temptations' that might hold great promises. The skill is to know how applicable they might be and if the benefits are costeffective. The bottom line is that any investment in these devices and systems should be justified and bring improvements in farm efficiency and cow performance, in areas such as production, health, fertility and welfare.

Classroom learning combined with practical experience and the opportunity to see technology in action on farm is invaluable, according to recent Harper Adams graduate and Northern Irelandbased dairy farmer Kirsten Henry.

Kirsten returned to the family dairy farm in 2024. Alongside a role as a genetic services specialist for a breeding company, she runs the 80-cow Holstein herd with her father and brother, who also has a contracting business.

The opportunity to learn about new technology and to visit a wide range of dairy units gave Kirsten the confidence to take technology to a new level on the family farm with the introduction of heat and activity collars. "I got a good grounding in digital technology in dairy in my four years at university," she says. "We had a dedicated module looking at the impact of technology on dairy units and likely developments in future."

She also values the opportunity to see a range of technologies in action on the university farm. "As well as this, I worked for Genus ABS in my placement year and had the opportunity to visit a wide range of farms. This is when I took special notice of heat detection collars



Kirsten Henry: A lot of research is needed before making an investment in dairy technology

"I got a good my four years at university" and what it took on farm to make them successful, and I could see how they might be beneficial on our own farm."

With the family's backing, Kirsten introduced the first collars in December 2022 on the Henry's home farm in Cookstown, County Tyrone. "They've been a real success," adds Kirsten. "They've done exactly what I'd hoped they'd do. It's like having a second pair of eyes on the cows 24/7 looking at health and rumination, and obviously picking up heats. "Our conception rate to first service is now at 80%;

the collars have really helped improve this as we know the optimal time when to inseminate, and pregnancy rates have increased by 10% year-on-year since the collars were introduced."

Keeping a subjective eye on the technology, she is mindful of the battery life in these collars and while they are still within their five-year warranty, Kirsten has no concerns if one needs changing but does not want the cost and inconvenience beyond this timeframe. "With all technology, you have to keep looking and learning and making the best choices for your own system."

Wise investments

Kirsten doesn't underplay the amount of research needed before making the investment in dairy technology, and she will apply this thorough scrutiny to any new investments.

"New tech has to fit in with the cows and the management system," she adds. "We're currently looking at a robotic milking system as the way forward and to ease the pressure on labour.

"Dad is keen to hand over the responsibility, and at 23 and with another job, I don't want to be restricted by milking times. I've done a lot of research and seen them in action. In the right system they free up time which can be used for managing cows and for putting the data generated to better use.'

She can see the advantage of a robotic milking system on their farm where cows are housed and calve all year round. "I think there's more to be gained from a robotic milking system in an intensive dairy system rather than a grazed and /or block calving herd," she says, adding that she had the chance of seeing robotic milking systems in some top herds she visited on the Nuffield Farming Next Generation tour in 2024.

"I was very fortunate to be in the first cohort of Nuffield Next Gen dairy scholars visiting these farms and as a small group we were able to question farmers on the pros and cons of the system." She highlights the benefit of awards like the Nuffield Next Gen for enabling young dairy farmers to get out and about and see the latest dairy technology first hand on dairy units.

This year, 2025, the next three Nuffield Next Gen dairy students sponsored by the Trehane Trust, will have the opportunity to visit leading farms and dairy organisations and see the latest tech. These sort of experiences alongside practical work and farm tech taught in the classroom help to equip dairy students with the tools they need to make the right choices when it comes to new technology on their own units.



Joanne Sharpe, Harper Adams PhD student:

"The extent that precision dairy technologies

Digital tech research

There's no shortage of digital tools and sensors, including wearable devices that monitor dairy cows 24/7, available. So just how many dairy farms use precision livestock farming technologies, and crucially, what extent the information generated is supporting on-farm decision-making asks Harper Adams PhD student Joanne Sharpe?

As part of her study, she's looking to answer these questions and to better understand what impact these tools and sensors have made on farm; for both cows and staff, by asking farmers to take part in a short survey. "The focus of the study is to evaluate to what extent information from these digital livestock technologies are able to support onfarm decision-making," says Joanne.

The survey results will identify ways to ensure dairy farmers can get the most out of the technologies they choose, both now and in the future. The work will also generate recommendations for manufacturers, farm advisors and industry groups, to enable them to better support farmers in optimising digital technology for decision-making and good cow management.

All dairy farmers are invited to take part in the survey, which should take about 10 minutes to complete. "The results will provide a database of what's on farm and the recommendations, based on successes, of different technologies in a range of situations. This will help with decision making going forward," she adds.

To access and complete the survey visit https://app.onlinesurveys.jisc.ac.uk/s/ harper-adams/plf or scan the QR code



Monitoring youngstock to improve dairy herd performance

Dr Monika Ptaszynska-Sutton, DVM PhD MRCVS, of MSD Animal Health takes a look at how using technology to monitor calf health not only improves youngstock development but also benefits herd performance later in life.

Why is it important to monitor youngstock?

Common health issues such as diarrhoea, respiratory disease, navel infections and joint diseases can have a profound impact on the growth rate and development of calves and can make them more susceptible to infection later in life.

A 2017 study estimated that respiratory infection during a heifer's first year significantly impacts fertility and lifetime milk yield:

- Two-week delay to first calving
- 4% reduction in first lactation milk yield
- 8% reduction in second lactation milk vield
- Lifetime reduction of 109 days in milk Respiratory disease also causes a reduction in daily liveweight gain of 72g for dairy-beef crosses and 202g for beef calves. Carcass quality is also impaired. (Bartram et al., VALUE IN HEALTH 20 (2017) A399-A811). Meanwhile, diarrhoea costs an average of €106 per calf in mortality losses, health expenditure, and labour (Roblin et al. Current Research in Parasitology & Vector-Borne Diseases; 4(2023):100149).

How do youngstock diseases affect an animal's productivity?

Any infection during a calf's first 12 months will:

- Reduce feed intake due to a loss of appetite or difficulties accessing feed because of weakness or painful movement (Brown and Bradford J. Dairy Sci. 2001;104:9418-9436).
- Reduce weight gain: sick calves will expend energy fighting off infection instead of growing.
- Nutrient absorption is also reduced, especially in calves affected by diarrhoea.

Calves that have experienced infection have a lower weight at weaning and reach breeding maturity later. This results in fewer calves and lower lifelong milk production. Beef calves will take longer to achieve slaughter weight and consume more feed per kg of meat produced.



How can monitoring technologies

Not all diseases can be completely prevented, but earlier diagnosis and treatment will improve calf survival, health and future production (Schoening et al., Clin. Microbiol. Infect. 11:579-582).

But, spotting the early signs of a health issue is not easy for a number of reasons:

- Calves will hide their illness to mask vulnerability.
- Farm staff can be too busy to spend enough time observing youngstock: a 2018 survey found that 37% of farmers felt their youngstock didn't get enough attention (National Youngstock Survey, MSD Animal Health, 2018).
- In large or seasonal calving herds, there are a lot of calves to take care of at the same time.

SenseHub Youngstock overcomes these barriers by monitoring a range of physiological functions and behavioural trends including mobility, breathing and time spent eating and ruminating to create a health index for each animal.

A calf that has a fever, is in pain, or is weak due to dehydration (caused by diarrhoea) will spend less time moving and more time lying. It will also eat and ruminate less. SenseHub Youngstock monitors for any deviation from the animal's normal health index and automatically generates a health alert to highlight the potential onset of illness. It also informs all relevant staff so that the appropriate treatment can be administered as soon as possible.

What can SenseHub Youngstock tell you about your youngstock?

SenseHub can't diagnose, treat, cure or prevent any disease, but it can provide early warnings about a decline in an animal's health. It can also provide a broader view of the health of groups of animals to assess how dietary or housing changes have impacted performance.

Monitoring with SenseHub Youngstock delivers the following henefits.

- Earlier identification and isolation of infected animals to reduce the spread of infection
- Faster recovery from illness
- Targeted use of staff time
- Reduced antibiotic usage, lower treatment costs, proactive health planning
- Selection of the herd's healthiest replacement heifers for breeding



How quickly can youngstock monitoring pay for itself?

This depends on the current health status and disease burden of the farm's existing youngstock.

- On average, most calf populations will suffer a mortality rate of approximately 10% due to diarrhoea or respiratory disease. Using SenseHub Youngstock has been shown to reduce this to less than 5%.
- Each calf not lost to illness is a cost saving that can be offset against the price of monitoring.
- Prevention is cheaper than cure: it costs less to safeguard the health of living animals than it does to breed and rear additional replacements.

More information

To find out more about how SenseHub® Youngstock works visit https:// uk.sensehub.global/youngstock/

What actually dictates litres per robot per day?

There is much talk in the industry about which robot is the quickest and which one has the potential to yield the most litres per day, writes specialist Gareth Jones.



here are 5 brands to choose from in The UK and so should this be a factor when it comes to making your decision on which one to buy? In my experience no, but let me explain my reason for this statement.

For the purposes of this article, I am only going to be basing my figures on single box systems, which all of the manufacturers produce, on a housed, free access system.

Apart from the speed with which the robots attach, there are two other crucial factors that influence output per box per day, which are average yield and milk speed. So, we have to start by looking at the time that is actually available for milking in 24 hours.

Firstly, we need to take wash time out, which is approximately an hour per day when washing 3 times in 24 hours. Recommended free time on a free access system is 10% in 24 hours, ie. When the robot is not milking, as this allows shy cows and heifers to pick their opportunity to get milked, so this needs to be deducted. I have then assumed that we have a buffer tank in place and so there is no time deduction for emptying the bulk tank, but I have added an additional 5% down time per day, to allow for any unforeseen issues.

As you can see from my calculations below, we now have just under nineteen and a half hours per day for milking.

	Minutes	Hours	
Minutes available in 24 hours	1440	24	
Minus wash time	60	1	
Minus 10% free time	144	2.4	
Minus 5% Av down time	72	1.2	
Remaining time	1164	19.4	

We now want to maximise the time that we have for milking and the best way to do this is with high yielding, fast milking cows, as they will produce more milk per visit in the quickest time. Low

Influence of milk yield and speed on robot output/day

Average litres /cow/day	Average milkings /cow/day	Average milk speed kg/min	Entry, prep attach and exit *	Total box time*	Total milkings /day	Cows in milk	Total litres /day
30	3	2.2	2	6.5	178	59	1778
35	3	2.4	2	6.9	170	57	1978
40	3	2.6	2	7.1	163	54	2178

Influence of attachment time on robot output/day

Average litres /cow/day	Average milkings /cow/day	Average milk speed	Entry, prep attach and exit *	Total box time*	Total milkings /day	Cows in milk	Total litres /day
30	3	2.2	2.0	6.5	178	59	1778
30	3	2.4	1.8	6.3	183	61	1834
40	3	2.6	2.0	7.1	163	54	2178
40	3	2.6	1.8	6.9	168	56	2240

yielding, slow milkers will take exactly the same amount of time to enter and exit the robot, undergo teat preparation and attachment as the high performing cows. So, they have a considerable negative impact on total output per robot per day. Much more so than the actual speed of attachment.

By keeping the entry, preparation, attachment, and exit time, constant we can see the effect of yield and milk speed. We actually gain a total 400 litres here, between the lowest and highest performing example with less cows in

I would consider the 40 litre average, per cow to be a high performing robot and of course the challenge is to achieve this 365 days of the year. To get beyond this, the herd will need an even higher yield or better milk speed and everything working in their favour.

If we take the same figures as above and decrease our attachment time by 10 seconds you can see that the impact is only around 60 litres per box per day. So, this has far less influence on milk

produced per box per day then yield and milk speed.

Unfortunately, very few conventional parlours measure milk speed and so it can be quite revealing when a farmer starts his robots up for the first time, to see the herd's performance. I have seen milk speeds as low as 1.9 Kg/minute which needless to say was a shock for us all and had a major impact the robot's output. Milk speed is purely down to genetics and so improving it can take years of breeding to have an impact of the whole herd.

Average milk yield and milk speed have a major influence on the total litres of milk you can produce per robot per day. Check your herd's milk speed, if possible before making the change to robotics, as this combined with your average yield, will dictate litres produced per day.

For more information contact Gareth Jones Tel: 07943838101, E: gareth@roboticmilkingsystems.com

Time to embrace the new Al revolution

For the second time the initials AI are set to bring big changes and potentially significant benefits to dairy farmers.

> n 1942 the abbreviation AI first entered the dairy farming vocabulary with the first cows artificially inseminated, setting in motion a revolution in dairy cow breeding and underpinning the exponential gains in yields and productivity.

Overcoming initial scepticism and distrust farmers grew to fully embrace the technology and it is now ingrained in everyday dairy farming. Now, just over 80 years later, the industry is on the verge of another AI revolution, this time with the advent of Artificial Intelligence systems which have the potential to radically change the industry.

"Currently this new AI is only having a marginal impact with farmers generally being sceptical or disinterested in what it might mean," comments Matt Dobbs CEO of Agsenze, and co-lead organiser of a major new industry event. "...the rate of development will be rapid, and this is why the industry needs to engage with it and make sure that AI developers produce systems the industry needs and that it keeps close control over how data is used.

"AI has the potential to significantly shape livestock farming for the better, developing creative solutions to the challenges the industry faces and turn the vast amount of data held by farmers and others in the industry into valuable insights."

Using the data AI systems might for example better predict disease risks, pinpoint ways to improve feed conversion or improve the precision of forage production, all of which would benefit producers. Currently there is no industry approach to what is developed and how which could be a big risk.

"It is fundamentally important that the development and use of AI in livestock farming is driven by the industry, remains farmer centric and recognises the value of farm data. We are already seeing AI developers approaching farms, processors and others for access to data with no mention of data security, how this will benefit their herds or how farmers will be remunerated for their data."





"Finally, the industry needs development of systems that can deliver real value

AI(Live) will be the UK's first conference dedicated to the development of Artificial Intelligence applications in the livestock industry. It will take place at The Science Museum in London on Tuesday 23rd September and is sponsored by HerdVision/Agsenze, IVC Farm Vets, Kynetec, MSD Animal Health, Vetoquinol, VetImprss and MWI.

The objectives of AI(Live) are to start the debate and establish and inform the principles by which AI and livestock farming can derive the maximum benefits, specifically focussing on education, setting standards for commercial

deployment of systems and reviewing applications for AI.

AI(Live) will bring together influential and well-renowned speakers from across the farming and technology sectors and will cover areas including harnessing data for precision agriculture, the role of data in driving sector growth, policy and regulation for Livestock AgriTech and imagining the future of livestock farming.

"There are three major areas where the industry needs to take the lead to ensure AI delivers what is needed to improve production and environmental efficiency," explains co-lead organiser Paul Horwood from IVC Farm Vets. "The first is education and understanding the potential of the rapidly evolving role of AI in livestock farming so farmers can contribute and guide the direction it takes.

"The second key area is governance. The industry must have a lead role in the governance of the development of Standards for the commercial deployment of AI systems. Central to this must be the issues of data ownership and realising the value of that data.

"Finally, the industry needs to influence the development of systems that can deliver real value to farming businesses."

AI can play a crucial role in harnessing cutting edge solutions to enhance productivity, sustainability and efficiency but is not well understood. The UK is already number two in the world for Agtech and can play a lead role in the development of AI in livestock production.

"The farming industry must make sure it is at the forefront of these developments. It can be argued that farmers have ceded influence of the environmental sustainability agenda, to the benefit of others in the food chain. This cannot be allowed to happen with AI. AI(Live) will help put producers and the industry at the centre of the AI revolution."

For further details and to register go to www.ailive.farm

The future of dairy farming

A seamless transition to robotic milking at Petsy Farm

For Richard Robinson, the decision to transition to robotic milking at Petsy Farm in Shropshire was one that required careful consideration, but in hindsight, it was an investment that has paid off in spades.

ichard, who took over the farm after it was established by his parents in 1967, now manages a herd of 150 cows with the help of three Fullwood Merlin milking robots, with plans to expand capacity to 300 cows across two sheds.

Initially, Robinson was hesitant about adopting robotic technology. The idea of a shift from traditional milking methods raised questions about the practicality and long-term viability of such an investment. However, after moving his dairy herd from Litchfield to the new, purposebuilt facility, the decision to embrace robotics became an obvious one.

The installation process was smooth, thanks to the expertise of Fullwood Joz fitters who worked closely with the team to ensure the setup met all the farm's specific needs.

One of the most significant benefits of the robots has been the improvement in cow health management. The ability to track milk yield and other indicators via robotic data has allowed Robinson to detect early signs of lameness, mastitis, and other potential health issues.



This data-driven approach has revolutionised the way he manages his herd, providing him with real-time insights that simply weren't possible with traditional milking methods.

However the benefits don't stop there. The herd has become noticeably calmer, with fewer disruptions during milking and less stress on the cows overall. This has had a direct impact on the welfare of the animals, which is not only crucial for ethical farming but also results in better overall health and increased milk yield.

In fact, the improved calmness in the herd has translated into smoother, more efficient day-today operations, reducing the physical strain on farm workers and enhancing animal care. Robinson is achieving 35 litres and 3.1 visits per cow per day.

Another major upside for Robinson is the improvement in work-life balance. Before the robots, long hours and early morning milking shifts were a regular part of farm life.

Now, with the automation in place, Robinson has the flexibility to schedule his time more effectively, shifting from physically demanding labour to more management-focused tasks. This has enabled him to achieve a more balanced lifestyle while still ensuring that the farm operates efficiently.

If you're considering a leap into the future of dairy farming, Robinson's experience serves as a compelling case for embracing robotics.

For all enquiries contact Pete Wooldridge at Wooldridge Milking Technologies 07595 718592 or 01453 798090.

Stay ahead in dairy technology with smaXtec

With smaXtec, dairy farmers are at the forefront of innovation. Combining bolus technology with precise data and AI, smaXtec provides unrivalled insights into your herd's health. Detect health issues before they become visible, take preventive action, and streamline your daily routine—herd health management has never been more effortless or effective.

In today's fast-paced dairy farming world, staying ahead means embracing innovation. smaXtec transforms herd health management, going beyond traditional monitoring. It's intelligent, proactive management that enhances productivity, improves animal welfare, and simplifies farm operations. For forward-thinking dairy farmers, smaXtec is the smart choice, providing real, measurable benefits. As Ellis Judson, who manages 200 cows in Anglesey off the northwest coast of Wales, puts it: "I have all the information at my fingertips exactly when I need it. Whenever we receive a notification, we always know exactly which cow to check on. I couldn't imagine working without it."



PROVEN RESULTS: A THIRD EYE WATCHING THE COWS

"It's like a third eye watching the cows. Our herd is much healthier, and it's generally much more efficient with the smaXtec boluses. We're now a more profitable business—without having to employ a third person," Robert Spiller from Somerset states. Emma Holden from Larne, Northern Ireland, shares a similar experience: "The insights into inner body temperature and rumination have enabled me to significantly reduce antibiotic usage across the herd and save cows before they're too far gone. It's not only improved welfare but also resulted in meaningful financial savings." Thomas Illingworth from Lockerbie, Scotland, adds: "We can now detect mastitis and other diseases up to three days before visible symptoms appear, allowing us to treat cows earlier and more effectively."

All these farmers are already shaping the future of dairy — now it's your turn. Join them and discover how smaXtec can transform your herd management. Visit us at www.smaXtec.com or contact us directly at info@smaXtec.com or +44 1629 380 780.



Automatic milk feeders for calves

Selecting the right system for your farm is no easy task. Sarah Bolt, Technical Knowledge Exchange Manager, Kingshay explores the key benefits and outlines what to consider when making the right choice for your operation.



Automatic milk feeder unit in position, ready for use - drainage is always a key consideration.

utomatic calf feeders are becoming increasingly popular on UK dairy farms, offering a valuable tool to improve labour efficiencies, calf performance, and overall calf management. When used carefully and hygienically, they can help deliver consistently better results.

Potential benefits from computerised calf feeders

The benefits of computerised calf feeders are numerous. They can significantly improve labour efficiencies by reducing the time needed for manual feeding, freeing up valuable hours for important tasks like calf health monitoring and weighing and ultimately driving better performance.

By allowing calves to feed little and often, automatic feeders closely mimic natural behaviour, encouraging earlier concentrate intake and supporting rumen development.

Feeding consistency is another major advantage, as the system ensures every calf receives milk at the correct quantity and temperature every time, something that can be difficult to achieve by hand. In addition, computerised feeders enable individualised feeding curves, allowing calves within the same group to follow tailored regimes to suit their specific needs, which aids better weaning strategies and offers flexibility to rear beef and dairy calves together.

Automated weaning is also possible, gradually reducing milk allowance to encourage concentrate consumption and stronger rumen development.

Lastly, these systems put data at farmers' fingertips, quickly flagging calves that are not drinking their full allocation for early intervention. Some models even track daily weight gains and automatically deliver medicines, providing even greater insight into calf health and performance.

Key considerations when choosing a machine

There is a wide variety of computerised calf feeders on the market, and not all systems offer the same features.



Young calves actively feeding from the automated milk feeding system.

"There is a wide variety of computerised calf feeders on the market, and not all systems

Consider how many feed stations one machine can support, as this will influence pen design and overall system setup. It is also important to check the distance a feed station can be from the central unit without compromising milk temperature, which could affect calf performance.

Look carefully at the system's software capabilities, assessing what it can monitor, such as disease detection, feeding programme flexibility, and options for remote access.

Finally, check whether the machine offers wireless technology, as cloudbased data storage can allow you to access performance data remotely, supporting more proactive calf management. Others offer additional features such as integrated weigh cells, automated medicine dosing, and teat cleaning systems, that can add significant

Automatic milk feeders have transformed calf rearing, but with so many models available, it can be difficult to know which system suits your farm best. That's where 'Tried & Tested' comes in. Just like Kingshay's previous reports described by farmers as the "Which? magazine for dairy". Each feeder reviewed will be scored based on feedback on ease of use, durability, efficiency, performance, and value for money, from farmers like you.

As Sarah Bolt, Technical Knowledge Exchange Manager at Kingshay, explains, "There's no better way to assess a product than to hear directly from the people using it. Peer reviews are especially valuable for big-ticket investments like automatic milk feeders."

If you are considering purchasing an automatic milk feeder for your calves, you might want to also look out for the results of our surveys...

HAVE YOUR SAY: Join our survey

Following the success of our first Tried & Tested survey with Kingshay on cow wearable technology (see results in May issue of British Dairying p28-30), British Dairying and Kingshay are excited to launch the second independent farm equipment review, this time focusing on automatic milk feeders for calves. (Results in the August issue of British Dairying).

We need your input!

Have you bought an automatic calf feeder in the past 10 years? Whether your experience has been good, bad, or somewhere in between, we want to hear from you.

Your feedback will help other farmers make better, more confident decisions; saving time, money, and helping calves thrive.

Take a few minutes to complete our survey and share your experience, please visit https://forms.office.com/e/ nPPDccQaG7.

Everyone completing a survey will be entered into a prize draw to win a £100 Amazon voucher.



CATEGORIES

THE CREAM AWARD - sponsored by Lely Atlantic
THE DAIRY SUSTAINABILITY AWARD - sponsored by Trouw Nutrition

>>>>

HIGH PERFORMANCE DAIRY FARM AWARD - sponsored by Arla Foods

MOST EFFICIENT AMS FARM - sponsored by Advanced Ruminant Nutrition

HIGH FEED EFFICIENCY AWARD - sponsored by KW Feeds

YOUNGSTOCK HEALTH & WELFARE AWARD - sponsored by Progiene

DAIRY VITALITY AWARD - sponsored by Wynnstay

FERTILITY HEALTH & WELFARE AWARD - sponsored by Volac Milk Replacers

>>>>

YOUNG DAIRY VET OF THE YEAR - sponsored by Virbac

NEW DAIRY VET PRACTICE OF THE YEAR - sponsored by Virbac

>>>>

DAIRY TEAM AWARD - sponsored by National Farmers Union
YOUNG DAIRY FARMER OF THE YEAR - sponsored by Kite Consulting
>>>>

DAIRY FARM DEVELOPMENT AWARD - sponsored by Vilofoss

AWARD FOR INNOVATION - sponsored by British Dairying

DAIRY INFLUENCER AWARD - sponsored by TBC

FOR TABLE ENQUIRIES AT THE EVENT IN SEPTEMBER,

PLEASE CONTACT: caroline@calderwood.cc T 01892 231604

Organised by British Dairying www.britishdairying.co.uk



WWW.CREAMAWARDS.UK

The 'Cream Awards' – Dairy Industry Trade Awards are a brand name of British Dairying, copyright © British Dairying 2025
E: caroline@calderwood.cc, or enter online at www.creamawards.UK www.britishdairying.co.uk No later than May 31st 2025 Tel: 01892 231604
If you do not wish your details to be passed on to a third party, please contact British Dairying e: nicki@britishdairying.co.uk. Thank you.



Bright farming is yours by choice



